In the Claims

Please amend the claims as follows:

1. (Original) A method comprising using a motor to accelerate a control object, and measuring a plurality of distances successively traveled by the control object during said acceleration to compensate for variation in motor torque.

2. (Original) The method of claim 1, wherein the using step comprises applying a constant control input to accelerate the control object at a constant rate of acceleration less than a maximum rate of acceleration that can be obtained by the motor.

3. (Original) The method of claim 1, further comprising maintaining the control object in a substantially fixed position to determine a magnitude of bias force upon the control object prior to acceleration of the motor during the using step.

4. (Original) The method of claim 1, wherein the plurality of measured distances of the measuring step comprises three measured distances.

5. (Original) The method of claim 1, wherein the measuring step comprises combining the plurality of measured distances to obtain a measured acceleration of the control object.

6. (Original) The method of claim 4, wherein the measuring step further comprises combining the measured acceleration with a nominal acceleration of the control object to determine a compensation value.

7. (Original) The method of claim 1, wherein the compensation value of the measuring step comprises a gain adjustment factor.

8. (Original) The method of claim 7, further comprising a step of subsequently accelerating the control object using the gain adjustment factor.

9. (Original) The method of claim 1, wherein the control object accelerated during the using step comprises an actuator of a data storage device that supports a data transducing head adjacent a recording medium.

10. (Original) The method of claim 1, wherein the measuring step further comprises performing a coarse adjustment routine to arrive at a first compensation value that compensates for said variations in motor torque at a first resolution, and then performing a fine adjustment routine using the first compensation value to arrive at a final compensation value at a second resolution greater than the first resolution.

11. (Original) An apparatus comprising a compensation circuit which measures a plurality of distances successively traveled by a control object during acceleration of said object by a motor to compensate for variation in motor torque.

12. (Original) The apparatus of claim 11, further comprising a control circuit which applies an input to the motor to accelerate the control object, wherein the compensation circuit determines a compensation value which is used by the control circuit to subsequently accelerate the control object.

13. (Original) The apparatus of claim 11, wherein the motor accelerates the control object at a constant rate of acceleration less than a maximum rate of acceleration that can be obtained by the motor.

14. (Original) The apparatus of claim 11, further comprising maintaining the control object in a substantially fixed position to determine a magnitude of bias force upon the control object prior to acceleration of the motor.

15. (Original) The apparatus of claim 11, wherein the plurality of measured distances comprises three measured distances.

16. (Original) The apparatus of claim 15, wherein the compensation circuit combines the three measured distances to obtain a measured acceleration of the control object.

17. (Original) The apparatus of claim 16, wherein the compensation circuit further combines the measured acceleration with a nominal acceleration of the control object to determine the compensation value.

18. (Original) The apparatus of claim 11, wherein the control object comprises an actuator of a data storage device that supports a data transducing head adjacent a recording medium.

19. (Original) The apparatus of claim 11, wherein the compensation value comprises a final compensation value, and wherein the compensation circuit performs a coarse adjustment routine to arrive at a first compensation value that compensates for said variations in motor torque at a first resolution, and then performs a fine adjustment routine using the first compensation value to arrive at the final compensation value at a second resolution greater than the first resolution,

20. (Original) An apparatus, comprising:

a motor which accelerates a control object; and

first means for determining a compensation value to compensate for variation in motor torque in relation to a plurality of measured distances successfully traveled by the control object during said acceleration.